

DO NOT ENTER  
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Appl. No. 09/508,512  
Amendment dated: October 22, 2003  
Reply to OA of: July 31, 2003

This listing of claims will replace all prior versions and listings of claims in the application.

**Listing of Claims:**

1(currently amended). A hygroscopic scintillator element suitable for selective response to tritiated water vapour and other hydrophilic tritiated species in a gas, which scintillator comprises a solid scintillator material having a layer of hygroscopic material thereon, said hygroscopic material comprising an aqueous or gel solution of a deliquescent salt, base or organic salt or an inorganic or organic substance which can adsorb water, or a combination of any of said substances.

2(previously presented). A scintillator element according to claim 1 wherein said solid scintillator material comprises any of, a plastic, an inorganic phosphor, an oxide based material, a glass or a combination of these materials.

Claim 3(canceled).

4(original). A scintillator element according to claim 1 wherein said hygroscopic layer is from 0.4 to 1 micron in thickness.

Claim 5(canceled).

6(previously presented). A scintillator element according to claim 1 wherein said hygroscopic material is selected from the group consisting of zinc chloride, potassium acetate, phosphoric acid and lithium chloride.

7(previously presented). A scintillator element according to claim 1 which further comprises a hydrated solid such as zeolite.